

REMARKS

Claim Amendments. The Applicant has amended pending claims 1 and 3 herein to more clearly define the subject matter of claims 1 and 3, and NOT to overcome any rejection of claims 1 and 3. No new matter was introduced by the amendment of claims 1 and 3 herein.

The Applicant has further amended pending claims 5-7 herein to overcome rejections of claims 5-7 as set forth below. No new matter was introduced by the amendment of claims 5-7 herein.

Claim Rejections. In the Non-Final Office Action, Examiner Hines rejected pending claims 1-7 on various grounds. The Applicant responds to each rejection as subsequently recited herein, and respectfully requests reconsideration of the present application:

- A. Examiner Hines rejected claims 5-7 under 35 U.S.C. §101 as reciting improper subject matter

The Applicant has amended claims 5-7 herein to depend from independent claim 1. Withdrawal of the rejection of dependent claims 5-7 under 35 U.S.C. §101 as reciting improper subject matter is therefore respectfully requested.

- B. Examiner Hines rejected claims 5-7 under 35 U.S.C. §112, ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention

The Applicant has amended claims 5-7 herein to depend from independent claim 1. Withdrawal of the rejection of dependent claims 5-7 under 35 U.S.C. §112, ¶2 as being indefinite is therefore respectfully requested.

- C. Examiner Hines rejected claims 6 and 7 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,847,497 to *Mehrotra et al.*

The Applicant has amended claims 6 and 7 herein to depend from independent claim 1. Withdrawal of the rejection of dependent claims 6 and 7 under 35 U.S.C. §102(b) as being anticipated by *Mehrotra* is therefore respectfully requested.

- D. Examiner Hines rejected claims 1-5 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0047525 to *Scholl et al.* in view of U.S. Patent No. 5,847,497 to *Mehrotra et al.*

The Applicant has thoroughly considered Examiner Hines' remarks concerning the patentability of claims 1-5 over *Scholl* in view of *Mehrotra*. The Applicant has also thoroughly read *Scholl* in view of *Mehrotra*. To warrant this §103(a) rejection of claims 1-5, *Scholl* and *Mehrotra* in combination must teach or suggest all of the limitations of independent claim 1. See, MPEP §2143. The Applicant respectfully traverses this §103(a) rejection of independent claim 1, because *Scholl* and *Mehrotra* in combination does not render independent claim 1 as being obvious view of the failure of *Scholl* and *Mehrotra* in combination to teach or suggest the limitation combination of independent claim 1.

Specifically, in a low-pressure gas discharge lamp provided with a gas discharge vessel containing an inert gas filling as a buffer gas and an indium compound, the inventors of independent claim 1 discovered the use of a tungsten electrode with a triple oxide emitter like BaO results in a disappearance of the indium compound from the gas discharge vessel due to a substantial reaction of the BaO with the indium compound. Through experimentation, the inventors of claim 1 further discovered the use of BaTiO₃ or an electron emitter substance similar to BaTiO₃ surprisingly did not react or at least scarcely perceptible reacted with the indium compound. As a result, the indium

compound did not disappear from the gas discharge vessel. See, U.S. Patent Application Serial No. 10/526,923 at page 1, line 24 to page 2, line 31.

Scholl. *Scholl* discloses (1) “a low-pressure gas discharge lamp equipped with a gas-discharge vessel containing an inert gas filling as a buffer gas and an indium halide, a thallium halide, a copper halide or any mixture thereof, and with electrodes and with means for generating and maintaining a low-pressure gas discharge” as recited in independent claim 1, and (2) an exemplary suitable material for the electrodes being tungsten with an oxide emitter. See, Scholl at paragraphs [0023]-[0047]. However, a careful review of *Scholl* reveals the fact that *Scholl* failed to discover or recognize that the use of a tungsten electrode with an oxide emitter may result in the indium compound disappearing from the gas discharge vessel.

Mehrotra. *Mehrotra* discloses “characterized in that a compound selected from a group of ABO_3 , A_3BO_{2+n} , $A_nC_2O_{5+n}$, and $A_nD_2O_{3+n}$ is used as an electron emitter substance, wherein: A = an alkaline earth element or a mixture of several different alkaline earth elements, B = cerium, titanium, zirconium, hafnium, or a mixture of these elements, C = vanadium, niobium, tantalum, or a mixture of these elements, D = scandium, yttrium, lanthanum, a rare earth element, or a mixture of these elements” as recited in independent claim 1. See, Mehrotra at column 4, line 48 to column 5, line 52. However, a careful review of *Mehrotra* reveals the fact that *Mehrotra* failed to discover or recognize that the use of $BaTiO_3$ or an electron emitter substance similar to $BaTiO_3$ would not result in an indium compound disappearing or at least perceptibly disappearing from a gas discharge vessel.

Scholl and Mehrotra in Combination. The Applicant respectfully asserts that, at the time of the invention of independent claim 1, one having ordinary skill in the art would not have known whether a combination of *Scholl* and *Mehrotra* would have or would not have

prevented the disappearance of an indium compound from a gas discharge vessel. This is evidenced by the fact the inventors of independent claim 1 had to conduct experiments to discover whether or not the use of BaTiO₃ or an electron emitter substance BaTiO₃ would result in the disappearance of an indium compound or other suitable compounds from the gas discharge vessel.

Withdrawal of the rejection of independent claim 1 U.S.C. §103(a) as being unpatentable over *Scholl* in view of *Mehrotra* is therefore respectfully requested.

Claims 2-7 depend from independent claim 1. Therefore, dependent claims 2-7 include all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 2-7 are allowable over *Scholl* in view of *Mehrotra* for at least the same reason as set forth herein with respect to independent claim 1 being allowable over *Scholl* in view of *Mehrotra*. Withdrawal of the rejection of dependent claims 2-7 under 35 U.S.C. §103(a) as being unpatentable over *Scholl* in view of *Mehrotra* is therefore respectfully requested.

SUMMARY

The Applicant respectfully submits that claims 1-7 as listed herein fully satisfy the requirements of 35 U.S.C. §§102, 103 and 112. In view of the foregoing, favorable consideration and early passage to issue of the present application is respectfully requested. If any points remain in issue that may best be resolved through a personal or telephonic interview, Examiner Hines is respectfully requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,
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